

**REMARKS**

Applicants respectfully submit that the present application is in condition for allowance in view of the foregoing amendments and following remarks.

Claims 3, 4, 6, 10 and 18 stand objected to by the Examiner. Claims 4, 6, 10 and 18 have been amended to correct the improper claim dependencies. Claim 3 has been amended to recite the proper spelling of acetic acid. Applicants submit that the amendments to these claims place these claims in condition to satisfy the Examiner's requirements.

Claims 1, 2, 5, 7, 9 and 11-17 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Power (USP 5,277,889). Applicants submit that Power does not disclose each and every element of the present claims.

With respect to present claims 1, 2, 5, 7 and 9, Applicants submit that present method claim 1 requires a precursor of the formula  $M^{x+}F_{(x-5)-y}B_y$ . In other words, present method claim 1 requires a precursor that possesses a metal-fluoride bond. Power does not disclose such a precursor. The method of Power involves organometallic precursors that possess metals bonded to the carbon atoms of an organic moiety, wherein a gas ( $CF_3$ ,  $CCl_3F$ ,  $SiF_4$ ,  $CO_2$ ,  $O_2$ ,  $Cl_2$ ,  $NF_3$  or  $F_2$ ) is introduced with a halogenated beta-diketonate in a reaction zone to form the deposited metal halides. Applicants submit that since Power does not disclose each and every element of present method claim 1, Power does not and can not anticipate present claims 1, 2, 5, 7 and 9.

With respect to present claims 11-17, which are product-by-process claims, Applicants submit that Power describes the deposition of pure metal halide compositions intended for use in the field of optics. More specifically, such pure metal halide compositions are used as pure metal halide glasses (col. 1, line 15) or as low loss optical waveguide fibres. What is intended to be created is a product having a superior optical transparency (col. 2, line 19). For such purpose, the carbon content of the metal halide compositions needs to be reduced. Powers provides a respective method.

Applicants submit that it is evident that the product which is obtained by the method of Power is different from the one required by present claims 11-17. Although according to both the instant application and Power, an amorphous metal fluoride is provided, the metal fluoride according to Power does not have a high surface area as does the metal fluoride required by the present claims, as explained below.

As outlined in the present specification, the inventors of the subject matter of the present claims have found that the amorphous metal fluoride can be formed by a process which can, in principle, be divided into two steps.

In the first step a solid, partially fluorinated metal compound which is going to provide the metal component of the amorphous metal fluoride is prepared, and this compound is highly distorted because of the presence of bulky groups in stoichiometric quantities. In a second step, this highly distorted amorphous metal fluoride is fully fluorinated under soft conditions so as to preserve the distortion. Typical reaction conditions comprise temperature ranges equal to or less than 350 °C, less than 200 °C and less than 100 °C. In the example, part of the instant application the respective

reaction is run at 350 °C. Under such reaction conditions a specific surface area of about 190 m<sup>2</sup>/g may be obtained.

In contrast thereto, according to Power, the reaction is run at 500 °C (col. 4, line 55; col. 5, line 33) which inevitably results in the at least partial destruction of the distortion observed under the "soft" reaction conditions of the present claims which is responsible for the generation of a high specific surface. Additionally, the method according to Power does not make use of an organic solvent, but uses a solid compound which is subjected to fluorination. The organic solvent used according to the present application, however, is responsible for the formation of the highly distorted metal fluoride which in turn provides for the high specific surface areas.

In other words, there are two differences in the reaction conditions of the present claims and the method according to Power which produce different end-products, i.e. an amorphous metal fluoride with and without a high specific surface area. First, the starting material differs which according to the present invention is a distorted metal fluoride (precursor), and, second, the reaction conditions of the fluorination process are different which in the present invention allows the end product to maintain the desired distortion.

For at least the above reasons, Applicants submit that Power does not and can not anticipate each and every element of claims 1, 2, 5, 7, 9 and 11-17. Applicants respectfully request reconsideration and withdrawal of this outstanding rejection.

Claims 1, 5, 8, 9 and 11-17 are rejected under 35 U.S.C. § 102(b) as being anticipated by Baizer et al. (USP 4,798,818). Applicants submit that Baizer does not disclose each and every element of the present claims.

Present claim 1 requires a precursor of the formula  $M^{x+}F_{(x-\delta)-y}B_y$ . Baizer discloses a metal-fluoride precursor, but fails to teach a precursor of the formula of the present invention wherein the precursor possesses a third group, B, that is coordinately bound to the metal. More specifically, Baizer uses neither the bulky precursor nor the soft reaction conditions involving an organic solvent which provides for the distortion of the metal fluoride. Because of this, the prerequisite to provide for an amorphous metal fluoride having a high specific surface area, are not given in this document of the prior art so that ultimately the end-product which is additionally subject to somewhat different reaction conditions (which, however, are not suitable to compensate for the shortcomings of the starting material) in the fluorination, is different.

That the method according to Baizer does not result in an amorphous metal fluoride may also be taken from table 6 (col. 12) where the specific surface area is indicated to be from a minimum of 4 to a maximum of  $57\text{ m}^2/\text{g}$ . Already because of this difference it is evident that the product obtained according to the method of the present claims and the method according to Baizer are different.

For at least the above reasons, Applicants submit that Baizer does not and can not anticipate each and every element of claims 1, 5, 8, 9 and 11-17. Applicants respectfully request reconsideration and withdrawal of this outstanding rejection.

In view of the foregoing amendments and remarks, Applicants respectfully submit that the present claims are now in condition for allowance. Early and favorable action is awaited.

Respectfully submitted,

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